QP Code: 621006 **Reg. No…….**

Sixth Semester B. Pharm Degree Supplementary Examinations
January 2022
Medicinal Chemistry

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Explain about Quantitative Structure-Activity Relationship (QSAR) concept, Hansch analysis and pharmacophore modelling.
2. Explain the chemistry and mechanism of action of antitubercular antibiotics and Discuss the SAR of quinolones.

Short Notes **(7x5=35)**

3. Explain on beta-lactum antibiotics.
4. Classify antimalarial drugs with structural examples.
5. Explain the chemistry and mechanism of action of tetracylines.
6. Classify antiviral drugs with structural examples.
7. Give the synthesis, mechanism of action and uses of metronidazole.
8. Outline the synthesis and mechanism of action of pamaquine.
9. Explain the Structural Activity Relationship (SAR) of antibacterial sulphonamides.

Answer Briefly **(10x2=20)**

10. What are beta-lactamase inhibitors
11. Give the structural examples for synthetic penicillins along with their therapeutic role.
12. Give the structure and uses of following
    - Metronidazole • DEC
13. List any four applications of combinatorial chemistry.
14. List the major applications of prodrugs
15. Give the structures and uses of
    - Sulphamethoxazole • Dapsone
16. Highlight the important structural requirements for antimalarial activity.
17. Explain the mechanism of action of acyclovir.
18. Write the chemical synthesis of miconazole.
19. Write the chemical synthesis of chloramphenicol.

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QP Code: 622006 **Reg. No…….**

Sixth Semester B. Pharm Degree Supplementary Examinations
January 2022
Pharmacology III

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Classify semisynthetic penicillins. Explain Beta – lactamase inhibitors.
2. Classify Anti- malarial drugs. Discuss their role in the treatment of malaria along with their adverse effects.

Short Notes **(7x5=35)**

3. Define Anti –tussives. Explain the drugs used as Anti –tussives.
4. H2 receptor blockers.
5. Prokinetic agents.
6. Classify anti-viral agents. Discuss the mechanism of Nucleoside Reverse Transcriptase Inhibitors.
7. Gentamicin.
8. What is the role of antimetabolites in cancer
9. Immunosuppressants.

Answer Briefly **(10x2=20)**

10. Name two Nasal decongestants.
11. Name two appetite stimulants.
12. List two toxicities each of bleomycin and doxorubicin.
13. Therapeutic uses of Fluroquinolones.
14. Name two topical sulphonamides.
15. Name two drugs for acne.
16. Define the term Lepra reaction.
17. Mention the uses of Terbinafine.
18. Side effects of chloramphenicol.
19. Two uses of Gene therapy.

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QP Code: 623006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
January 2022
Herbal Drug Technology
(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Explain plant based industries and institutions involved in work on medicinal and aromatic plants in India.
2. Explain the guidelines of Good Agriculture Practice (GAP) in cultivation of medicinal plants.

Short Notes **(7x5=35)**

3. Explain phytosomes.
4. Describe any two herbs used as nutraceuticals
5. Explain hair care products.
6. Explain flavors and perfumes as excipients.
7. Mention objectives of good manufacturing practice of Indian system of medicine.
8. State ICH guidelines for evaluation of herbal drugs.
9. Explain preparation of Lehya along with one example.

Answer Briefly **(10x2=20)**

10. Mention source and pharmaceutical uses of bees wax.
11. Define schedule Z.
12. Mention the source and uses of any two fixed oils.
13. Define bioprospecting.
14. Explain viscosity builders.
15. Mention the health benefits of Ashwagandha.
16. Mention the anti-oxidants used in oral hygiene products.
17. Explain the benefits of patenting.
18. Define biodynamic agriculture.
19. Explain how Ayurveda medicine is different from herbal medicine.

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QP Code: 624006 **Reg. No…….**

Sixth Semester B. Pharm Degree Supplementary Examinations
January 2022
Biopharmaceutics and Pharmacokinetics
(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Explain non-linear pharmacokinetics. What are the factors causing non-linearity. Explain the Michaelis – Menten method of estimating parameters.
2. Define renal excretion of drugs. Explain the factors affecting renal excretion of drugs.

Short Notes **(7x5=35)**

3. Volume of drug distribution and its significance.
4. Explain the clinical significance of protein binding of drugs.
5. Explain the method of residuals to determine the absorption rate constant for a drug. Which follows one compartment open model extra vascular administration.
6. Explain in-vitro and in-vivo correlation.
7. Explain the concept of non-compartmental analysis and give its advantages and limitations.
8. Define pharmacokinetic terms Vd, $t_{½}$, AUC, CL_T and MRT.
9. Explain enterohepatic cycling of drugs. What is its significance on the excretion of drugs

Answer Briefly **(10x2=20)**

10. Define elimination half-life.
11. Define bioavailability and bioequivalence.
12. Define biotransformation
13. Explain extraction ratio.
14. Explain the sigma minus method for estimating K_E from urinary excretion data following one-compartment open model.
15. Biopharmaceutical classification system.
16. Differentiate passive and active transport mechanisms.
17. Explain physiological modeling.
18. Explain loading dose and maintenance dose.
19. Explain the key features of any one official apparatus for dissolution studies.

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QP Code: 625006 **Reg. No…….**

Sixth Semester B. Pharm Degree Supplementary Examinations
January 2022
Pharmaceutical Biotechnology

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Define rDNA technology. Discuss in detail about the steps of rDNA technology.
2. Write in detail on mechanisms and significance of Hypersensitivity reactions.

Short Notes **(7x5=35)**

3. Production of protease.
4. Explain the collection, processing and storage of whole human blood.
5. Explain about ELISA technique and its applications.
6. With the help of neat labelled diagram explain about structure of immunoglobulin and its classification.
7. Explain the general method of preparation of any one bacterial vaccine with examples.
8. Write in detail about gene transfer mechanism by transformation.
9. Differentiate between humoral and cell mediated immunity with examples.

Answer Briefly **(10x2=20)**

10. Restriction endonucleases
11. Name any two commonly used microorganisms used for production of vitamin B_{12} by fermentation.
12. Southern blotting
13. Explain any one toxoid production with example.
14. Define enzyme immobilization
15. Plasma substitutes.
16. Immune suppression
17. Transposons
18. Define microbial biotransformation.
19. Biosensors

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QP Code: 626006 **Reg. No…….**

Sixth Semester B. Pharm Degree Supplementary Examinations
January 2022
Pharmaceutical Quality Assurance

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Discuss on standard operating procedure and write its significance for manufacturing process.
2. Give an account of QSEM with special emphasis on Q-series guidelines.

Short Notes **(7x5=35)**

3. Explain functions of good warehousing practice.
4. Design the sterile area for pharmaceutical industry.
5. Briefly note the elements and philosophy of total quality management
6. Quality documentation and how records are distributed.
7. Explain the quality control test for secondary packing materials.
8. Explain validation master plan
9. Define the term ISO 9000 and give its element and benefits

Answer Briefly **(10x2=20)**

10. Define quality assurance.
11. Explain the term quality review.
12. Explain the general principles of good laboratory practice.
13. Good manufacturing practice.
14. Name the different types of validation.
15. Explain reports and documents.
16. What are the different contamination source in pharma industry.
17. Give the importance of validation.
18. What are the different types of pharmaceutical waste.
19. Explain the types of equipment maintenance.

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